

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.6
Op2

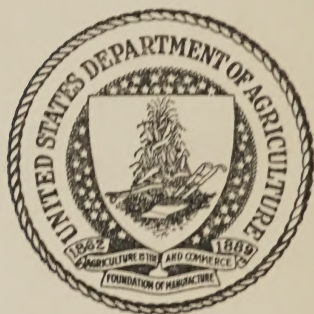
PROCEDURE FOR MAKING SOIL CONSERVATION SURVEYS

*Outline No. 4 superseding
previous issues*



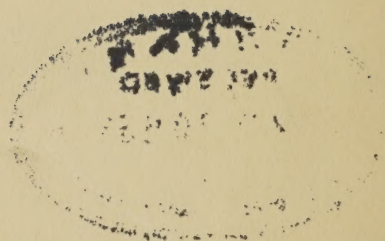
United States Department of Agriculture
Soil Conservation Service

UNITED STATES
DEPARTMENT OF AGRICULTURE
LIBRARY



BOOK NUMBER
839745

1.6
Op2



UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF



PROCEDURE FOR MAKING
SOIL CONSERVATION SURVEYS

*Outline No. 4 superseding
previous issues*

Approved by
GLENN L. FULLER
Head, Section of Conservation Surveys

April 1936



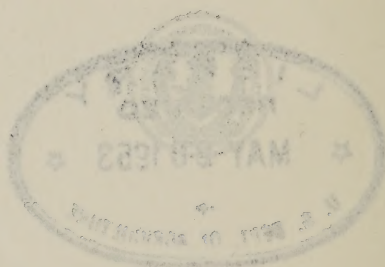
UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1936

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, Chief

PROCEDURE FOR MAKING
SOIL CONSERVATION SURVEYS

Guides No. 1
General Survey

Approved by
GLENN L. FULLER
Head, Section of Conservation Surveys
April 1938



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1931

INDEX

	Page
I. BASE MAPS.....	1
Kinds of maps.....	1
Scale.....	1
General instructions.....	1
Names on maps.....	1
Map orientation.....	1
Small area identification.....	2
Record on back of maps.....	2
Maps for Washington office.....	2
Detail of mapping.....	3
II. SYMBOLS.....	3
Drainage symbols.....	3
Cultural symbols.....	4
Land ownership designation.....	4
Civil boundaries.....	5
Project boundary.....	5
Fences.....	5
Pipe lines and power lines.....	6
Roads, railroads, etc.....	6
Buildings.....	8
Cemeteries.....	8
Air navigation.....	8
Mine or quarry.....	8
Other works and structures.....	8
Gravelly and stony areas.....	8
Conservation survey symbols.....	9
Factors shown.....	9
Urban areas, farmsteads, etc.....	9
Conservation survey boundaries.....	10
III. DIFFERENTIATION OF THE FOUR MAJOR LAND CLASSIFICATION FACTORS FOR CONSERVATION SURVEYS.....	10
Erosion.....	10
Water erosion.....	11
Sheet erosion.....	11
Gully erosion.....	12
Wind erosion.....	14
Removals.....	14
Accumulations.....	14
Class Z erosion.....	15
Class Θ erosion.....	16
Stabilization.....	16
Land use classification.....	16
Slope groups as related to water erosion.....	17
Differentiation of soils.....	19
Correlation.....	19
Sequence of symbols.....	19
IV. REPORTS.....	20

PROCEDURE FOR MAKING SOIL CONSERVATION SURVEYS

The following instructions are for use in making soil conservation surveys, including surveys on Soil Conservation Service projects. These surveys embody the designation of four factors, namely: (1) Character and degree of erosion; (2) present land use or cover; (3) percent and class of slope; and (4) soil.

I.—BASE MAPS

A. KINDS OF MAPS.

1. **Aerial Survey Base Maps.**—Aerial base maps will be used for erosion surveys where available and suitable.

2. **Plane Table Survey Maps.**—When aerial base maps are not available or suitable, plane table surveys will be made unless authorization is given for use of other base maps.

B. SCALE.

1. **Detailed Surveys.**—On detailed surveys the scale should be at 4 inches=1 mile (1 inch=1320 feet) or some multiple of 4.

2. **Detailed Reconnaissance Surveys.**—On detailed reconnaissance surveys the scale should be at 1 inch=1 mile or 2 inches=1 mile.

3. **Reconnaissance Surveys.**—On reconnaissance surveys the scale should be at 1 inch or less per mile.

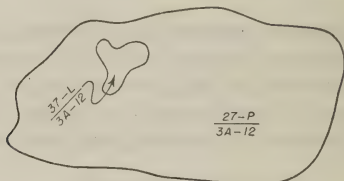
C. GENERAL INSTRUCTIONS.

1. **Names on Maps.**—The name of every feature that will help to identify locations should be shown on maps. This includes all cities and towns, schools, churches, stores, highways, rivers, creeks, and other important features that have commonly accepted names.

2. **Map Orientation.**—All symbols on plane table sheets must be oriented to be read from the south.

On aerial sheets the symbols should be placed parallel to that edge which permits them to be read approximately from the south. The orientation must be uniform on all sheets.

3. Small Area Identification.—An important area too small to contain a complete symbol may be identified by placing the symbol outside at an angle of 45° to the other erosion symbols, with a small arrow leading into the area delineated, thus:

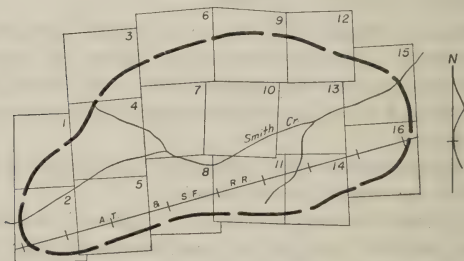


4. Record on Back of Maps.—Each field sheet must bear upon the back the following information:

- (a). Name of project and State.
- (b). Kind or character of survey.
- (c). Party or parties making survey.
- (d). Date of survey.
- (e). Farm index number and corresponding cooperative agreement number if assigned.
- (f). Scale.

When a survey consists of several sheets, a small sketch map as illustrated below should accompany the sheets, showing:

- (a). The number and order of arrangement of each sheet.
- (b). Approximate boundary of the project.
- (c). One or more prominent tie-in features, such as a railroad, river, etc.



5. Maps for Washington Office.—One copy of each field sheet or the original should be prepared for delivery to the Section of Conservation Surveys, Soil Conservation Service, Washington, D. C. **ADJOINING FIELD SHEETS MUST BE MATCHED BEFORE BEING SENT TO WASHINGTON.**

A complete legend of all symbols used must accompany each set of field sheets sent to Washington. Each legend sheet must bear the name of the project and date legend was adopted.

6. Detail of Mapping.—The detail of mapping will be determined by practical application. *No designation should be shown which is too small to be of significance for practical land-use recommendations.* On the other hand, on detailed surveys, *all conditions should be indicated which are important for the development of a land-use program.* On other than detailed surveys, the degree of detail will be determined by the purpose of the survey.

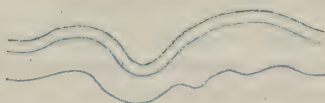
II.—SYMBOLS

Standard symbols as approved by the Washington office of the Soil Conservation Service must be used on all maps. **SYMBOLS ON ALL MAPS MUST BE DISTINCT AND LEGIBLE.**

A. DRAINAGE SYMBOLS.

The outlines of streams on aerial maps are not always clear. Therefore, it is desirable that the streams, both *continuous streams* and *intermittent streams*, be indicated on all maps. Drainage features will be indicated as follows in blue:

CONTINUOUS STREAMS



INTERMITTENT STREAMS



*STREAMS WHOSE CHANNELS
DISAPPEAR IN SINKS*



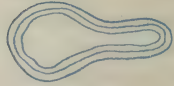
*STREAMS WHICH TERMINATE
ON FLATS OR ALLUVIAL FANS*



CANALS OR DITCHES -----



LAKES OR PONDS -----



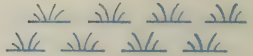
INTERMITTENT LAKES OR PONDS



SPRING -----



MARSH -----



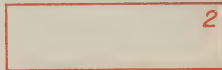
WELL OR WATER TANK -----





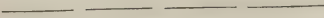
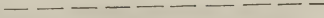
B. CULTURAL SYMBOLS.

1. Land Ownership Designation.—On project surveys an outline of each individual farm will be indicated on the base map by a solid red line.


A farm index number is to be assigned to each farm, thus:



2. Civil Boundaries.—Civil boundaries are to be indicated as follows in black:

STATE 
COUNTY 
TOWNSHIP 
SECTION LINES 

Where township lines are not established, Spanish grant lines, league lines, or military district lines may be indicated as follows:

SPANISH GRANT
LINES 

League and military district lines, same as township lines; labor lines, as section lines.

3. Project Boundary.— 

4. Fences.—On detailed surveys permanent fences will be indicated by small black x's on a fine, broken, black line as follows:

X—X—X—X—

Where the fence is on the farm boundary, black x's should be placed on the unbroken red boundary line, as follows:

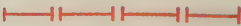
X—X—X—X—X—

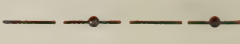
Drifted Fences.—Where desired to indicate serious soil drifting along fences, the condition will be indicated by short, single, vertical lines substituted for the x's on the drifted portions, as follows:

x—|—|—|—x

5. Pipe Lines and Power Lines.—Where necessary to indicate the exact locations of water mains, gas lines, etc., these will be indicated as follows:

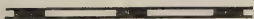
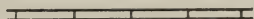
WATER-MAINS 

GAS & OIL LINES 

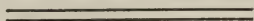
**POWER TRANSMISSION
LINES** 

6. Roads, Railroads, etc.—Roads, railroads, etc., should be indicated as follows (streams should be shown in blue):

HARD-SURFACED HIGHWAY-----

SEMI-HARD-SURFACED ROAD
SUCH AS GRAVEL, SAND-CLAY ETC.

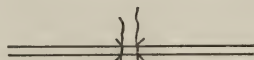
PUBLIC DIRT ROAD-----



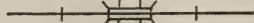
FIELD ROAD OR PRIVATE ROAD--



HIGHWAY BRIDGE-----



RAILROAD BRIDGE-----



FERRY-----



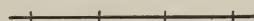
FORD-----



DAM-----



RAILROAD, SINGLE TRACK----



RAILROAD, DOUBLE TRACK----



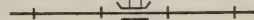
RAILROAD STATION-----



GRADE CROSSING-----



RAILROAD ABOVE HIGHWAY--




RAILROAD BENEATH HIGHWAY--



7. **Buildings.**—On all maps, including aerial photographs, indicate residences in black ink in order that their locations may stand out from a group of buildings and be more conspicuous on the maps, thus:




Schools, churches, and other public buildings should be indicated in black by the following standard symbols:

SCHOOL ----- 

CHURCH ----- 

OTHER PUBLIC BUILDINGS   

8. **Cemeteries.**—Cemeteries should be indicated in black as follows:

CEMETERIES 

9. **Air navigations symbols.**

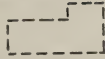
LANDING FIELD ----- 

AIRWAY LIGHT BEACON 

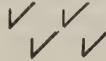
10. Mine or quarry of any kind.

MINES, QUARRIES
OR GRAVEL PITS ----- 

11. Other works and structures.

IMPORTANT RUINS*CLIFF DWELLINGS*

12. Gravelly and stony areas.

GRAVELLY AREAS*STONY AREAS**ROCK OUTCROP*

C. CONSERVATION SURVEY SYMBOLS.

1. **Factors Shown.**—The survey will always show the four factors:

- (1) Character and degree of erosion;
- (2) present land use or cover;
- (3) percent and class of slope;
- (4) soil.

They should be shown in a composite symbol expressed in the following order:

$$\frac{\text{Erosion—Land Use}}{\text{Slope—Soil}}$$

EACH AND EVERY AREA DELINEATED MUST BEAR THIS COMPLETE COMPOSITE SYMBOL.

A change in any one factor will necessitate the delineation of another area with a new complete symbol incorporating the change, i. e., a complete symbol showing all four factors must be used for each area delineated.

2. **Urban Areas, Farmsteads, etc.**—Since all areas on a sheet must be completely mapped, in order to minimize the mapping of detail which will not be used in erosion-control practices, the symbol H will be used to designate land use on urban areas,

farmsteads, golf courses, wide highways, etc. Erosion symbol Θ will be shown on urban areas, farmsteads, etc., unless erosion conditions are important or can be readily mapped.

3. Conservation Survey Boundaries.—Erosion, land use, slope, and soil boundaries are to be indicated by a fine, *solid* black line on *aerial photographs*. On plane table maps, these boundaries may be indicated by a fine, closely spaced, dotted line, or a solid line.

The lines indicating roads, fences, property lines, or drainage should never be used as conservation survey boundary lines except in the case of drainage where a large body of water or double line stream forms a boundary. Where the conservation survey boundaries coincide with roads, fences, property lines, or single line drainage, a separate boundary must be drawn immediately to one side. In other words, *all conservation survey boundaries must be completely closed*.

EACH AREA DELINEATED MUST BE ENCLOSED BY THE STANDARD INCLUSION BOUNDARY LINE except where a double line stream or a large body of water forms one boundary.

EACH SEPARATE AREA DELINEATED MUST HAVE A COMPLETE COMPOSITE SYMBOL SHOWING EROSION, LAND USE, SLOPE, AND SOIL.

III.—DIFFERENTIATION OF THE FOUR MAJOR LAND CLASSIFICATION FACTORS FOR CONSERVATION SURVEYS

A. EROSION.

The kind and extent of erosion is to be shown by classes, designated by numerical symbols for water erosion and letter symbols for wind erosion. The fundamental principles of distinction between classes will be the same in all regions. There will be areas showing no apparent erosion, areas with various stages of sheet erosion, areas with gullies, and areas eroded by wind. The degree of erosion is to be determined by estimation of the percentage of the soil horizons that have been removed as compared with the depth of the virgin soil under similar topographic conditions.

Class 1. Areas showing no apparent accelerated erosion.—This class includes, and is confined to,

virgin soil areas on which there is no apparent accelerated erosion.

1. WATER EROSION:

a. Sheet erosion:

Class 2. Slight sheet erosion.—Less than 25 percent of the A horizon removed. This class will include also those cultivated areas on which there is no apparent accelerated erosion. To subdivide this group to express conditions more adequately, divisions will be expressed by 2, 22, etc., and should be fully described in the legend.

Class 3. Moderate sheet erosion.—25 to 75 percent of the A horizon removed. When found necessary to subdivide this group to express more adequately those conditions that affect land use, the figure 3 may be used to designate 25 to 50 percent of the A horizon lost and 33 may be used to designate 50 to 75 percent lost.

Class 4. Severe sheet erosion.—Over 75 percent or all of the A horizon or the upper part of the B horizon lost by sheet erosion. In subdividing this class, 4 may be used to indicate sheet erosion of the lower A horizon and 44 may be used to indicate sheet erosion of the upper B horizon.

Class 5. Very severe sheet erosion.—Sheet erosion of the lower B and the C horizon, or parent material. In subdividing this class, where 5 would express sheet erosion of the lower B horizon with the C horizon exposed in spots, 55 would express complete exposure of the C horizon.

All preceding classes will be used to indicate accelerated erosion. See Class Z erosion, p. 15.

Class 6.—This class may indicate slips, cat steps, etc. Slips which are too small to be outlined on a map may be indicated by the following symbol:)

Class +.—Recent alluvial and colluvial deposition. This class will include *recent* alluvial deposits and areas on which there has been deposition incident to erosion above the area. This class may be indicated by the symbol +. When used to express

these conditions, this symbol will be used without other erosion symbols but with *all other* factors expressed.

b. Gully erosion:

Gully erosion is that type of accelerated erosion which produces definite channels larger than would be obliterated by normal tillage. Small incipient channels and rills which would be obliterated by normal tillage are considered as a phase of sheet erosion and are included in the sheet erosion classes.

Class 7. Occasional gullies.—An average of three gullies or less per acre, or gullies 100 feet or more apart laterally.

Class 8. Frequent gullies.—An average of more than three gullies per acre, or gullies less than 100 feet apart laterally but less than 75 percent of the area included within the gullies.

Class 9. Very frequent or destructively large gullies.—An intricate network of gullies that has dissected an area so thoroughly that 75 percent or more of the area delineated is included within gullies. It includes also an area that is entirely within a single large gully. Thus, this class is applied to a single deep gully or to an intricately dissected area.

USE OF GULLY SYMBOLS.

Symbols 7 and 8 should be shown in conjunction with sheet and/or wind erosion symbols; i. e., they should never be used alone. Symbol 9 should be used without other *erosion* symbols but with all other factors given.

DEPTH OF GULLIES.

Three classes of gully depths may occur and wherever found should be indicated:

A gullies.—These include shallow gullies which could be crossed by tillage implements but which would *not* be obliterated by normal tillage operations. Shallow gullies will be designated by the gully symbols 7, 8, or 9.

B gullies.—These include gullies which could not be crossed by tillage implements, which have not penetrated into a deep friable C horizon but which may penetrate into a compact C horizon. They will be designated by a circle around the gully symbol, as ⑦, ⑧, or ⑨. In some sections this is the only class which will occur.

C gullies.—These include gullies which could not be crossed by tillage implements and which have penetrated into a deep friable C horizon. They will be designated by following the gully symbol with the capital letter V, as 7V; or by placing the gully symbol within the V, as ∇^7 . Such gullies should be distinguished from those deep gullies which penetrate only into a B horizon or into a compact C horizon, since it is a problem of greater magnitude to control a gully which extends into a deep friable C horizon.

INDIVIDUAL GULLY DELINEATION.

Gullies that need the attention of the engineers are not always clear on the aerial maps. These may be indicated in *red ink* to emphasize their location.

In regions where gullies are infrequent, usually less than 1 in 5 acres, line symbols may be used in *red ink* to indicate the location and depth of each individual gully. *However, all areas on which single gullies are designated must be mapped also in the 7, 8, or 9 classification.*

An individual deep gully—class B—that cannot be crossed by farm machinery may be indicated by a dash and two dots in red, thus:



An individual deep gully of class C type may be indicated by a wavy red line, thus:



2. WIND EROSION:

Since it is necessary to differentiate between water erosion and wind erosion, the following letters will be used for the wind erosion classes. Two categories of wind erosion will be designated, (1) removals and (2) accumulations.

1. Removals:

Class P. Slight wind erosion.—Less than 25 percent of the A horizon removed.

Class R. Moderate wind erosion.—25 to 75 percent of the A horizon removed. Where regional conditions justify subdivision of this class, R may be used to represent the removal of 25 to 50 percent of the A horizon and RR the removal of 50 to 75 percent.

Class S. Severe wind erosion.—Over 75 percent or all of the A horizon or any portion of the upper B horizon lost by wind erosion.

Class T. Very severe wind erosion.—Wind erosion of the lower B horizon or the C horizon, or parent material.

Areas on which wind erosion has penetrated into a deep friable C horizon should be distinguished from those areas which are eroding only in an A or B horizon or in a compact C horizon. Such areas should be indicated by following the removal symbol with the symbol V, as TV, or by placing the removal symbol within the V, as ∇^T .

2. Accumulations:

Class F.—Shallow accumulations 0 to 6 inches deep, either level or in hummocks.

Class H.—Moderate accumulations, *level*, 6 to 12 inches deep.

Class K.—Moderate accumulations, *hummocky*, 6 to 12 inches deep.

Class L.—Severe accumulations, 12 to 36 inches deep.

Class N.—Small dunes, 36 to 72 inches high.

Class O.—Large dunes, over 72 inches high.

The proportion of the area covered by accumulations *may* be indicated by following the class letter by the numeral 1 to indicate less than one-third of

the area affected; 2 to indicate one-third to two-thirds of the area affected; and 3 to indicate more than two-thirds of the area affected.

To indicate whether accumulations have occurred on original surface soil or upon areas from which the surface soil has previously been removed, the numeral indicating the proportion covered will be placed in a prime position when the deposition has taken place upon an area from which the surface soil has been removed. When deposition has taken place upon the surface soil, the numeral indicating proportion covered will be placed on a line with the letter. Illustrations: $F^2=0$ to 6 inches accumulation covering one-third to two-thirds of the area delineated from which the surface soil has previously been removed. $F2=0$ to 6 inches accumulation covering one-third to two-thirds of the area delineated, the deposition occurring upon the original surface soil.

Where conditions justify subdivision of any wind erosion class, the class letter will be used for the first subdivision and the double letter for the second subdivision, as $F=0$ to 3 inches and $FF=3$ to 6 inches. Such subdivisions refer *exclusively to depth* and not to any other characteristics.

Wind erosion symbols for removal and for deposition will be used together or individually as the conditions warrant.

3. CLASS Z EROSION:

Class Z erosion is that erosion occurring in areas which, under natural environment, have never supported sufficient vegetation to effect stabilization.

It follows, then, that Class 1 erosion is that non-eroding condition on areas which support sufficient vegetation to effect stabilization under existing natural environment.

Class Z erosion is distinguished from Class 1 and from all accelerated erosion classes. Accelerated erosion is that erosion which has been increased above that which existed under natural environment, either by the destruction of vegetative cover or by some activity of man.

4. CLASS Θ , SUPPLEMENTARY CLASS:

Class Θ is undifferentiated erosion. This symbol should be used on urban areas, farmsteads, wide highways, etc., unless erosion conditions are important or can be readily mapped.

Subdivisions of any erosion classes are to be used to express erosion conditions *only*.

STABILIZATION.

Wherever any type of accelerated erosion, whether gully, sheet, or wind erosion or all, has been partially or completely stabilized by vegetative cover, such conditions should be indicated.

Partial Stabilization.

Inverted V over any symbol indicates partial stabilization of that class, as: $\overset{\wedge}{3}$, $\overset{\wedge}{7}$, \hat{R} , \hat{H} .

Complete Stabilization.

Overscoring any erosion symbol indicates complete stabilization of that class, as $\overline{3}$, $\overline{7}$, \overline{R} , \overline{H} .

In mapping gully stabilization, \wedge that part of the gully which is partially or completely stabilized should be included within brackets.

B. LAND USE CLASSIFICATION.

Four major land-use classes will be shown by the following symbols:

Class L. Cultivated land.—This will include in addition to land plowed and planted to crops, (1) fallowed land, (2) orchard, (3) land seeded down for several years to grass, alfalfa, and other forage crops grown in rotation for hay. Wherever deemed necessary, this class may be subdivided to indicate specific crops by establishing a legend of crops designated by L1, L2, etc.

Class P. Pasture and grazing land.—Pasture includes range or grazing land and land in grass or legumes devoted primarily to grazing.

The cover, type, condition, etc., of the pasture or grazing land may be expressed in subclasses, as P1, P2, P3, etc. Wherever brushy pasture occurs, it should be indicated by PB.

Class X. Idle land.—Includes land not used at present. This may be subdivided into X1, X2, etc., to express special conditions if deemed necessary.

Class F. Woodland.—Includes land with 40 percent of the ground covered by shade trees of any age.

Class F may be subdivided to express additional information, such as—

Type of woodland,

Condition of woodland, etc.

The subdivisions should be expressed as F1, F2, F3, etc. Pastured woodland shall be indicated by overscoring the woodland symbol \bar{F} . These subdivisions must be described in detail in the legend, which must accompany all maps.

Class H. Supplementary class.—Includes urban areas, farmsteads, golf courses, wide highways, etc.

C. SLOPE GROUPS AS RELATED TO WATER EROSION.

Since the extent and severity of erosion, as well as practical land usage, are closely related to the degree of slope, the land will be classified into slope groups.

1. As applied primarily to agricultural areas or those other than grazing and mountain lands:

On agricultural lands, four slope groups will be shown to express the major land use adaptations as determined by the degree of slope only. Each of these groups may be subdivided to express additional information by using the single letter for the first division and by repeating the letter for the higher subdivision.

GROUP A.—The first group will be designated by the symbol A. It will include comparatively level areas upon which there will be a minimum of erosion under normal conditions of tillage. This group will include those areas having a slope ranging from 0 to 2, 3, or 5 percent, etc., as will be determined by soil, climate, or other factors.

GROUP B.—The second group will be designated by the symbol B. It will include that range of slope above the A group on which, under prevailing conditions of use, erosion is active on areas in cultivation but on which effective control

measures can be established and still permit the growing of clean-tilled crops. The range for this group will vary in different sections of the country and will be determined by soil, climate, or other factors.

GROUP C.—The third group will be designated by the symbol C. It will include those slopes on which clean-tilled crops should not be grown but which may be used for legumes, pasture, and other close-growing crops if planted to provide cover throughout the year. These slopes are too steep to permit erosion control with clean-tilled crops or fallow cultivation.

GROUP D.—The fourth group will be designated by the symbol D and will include those slopes which are too steep to permit effective erosion control if in cultivation.

This group may be divided into a subdivision which is suitable only for woodland, where such differentiation is due to differences in degree of slope.

IN SOME AREAS BEING SURVEYED ONE OR MORE SLOPE GROUPS MAY NOT OCCUR AND THEREFORE CANNOT BE MAPPED.

Where any slope group includes a wide range, the dominating percent of slope for each area delineated must be shown on all detailed surveys in addition to the slope group symbol. This is done by placing the figures designating the dominant percent of slope before the slope symbol, thus: 5 B, 11 C, or 45 D; denoting a B slope with a dominating slope of 5 percent, a C slope with a dominating slope of 11 percent, or a D slope with a dominating slope of 45 percent.

2. As applied to grazing and mountain lands:

On grazing or other uncultivated lands where it is found impracticable to evaluate erosion conditions in terms of land use, arbitrary slope groups may be established and expressed in 5, 10, or 20 percent divisions, the divisions to be established to meet local requirements. These groups will be expressed by letters beginning with the letter E and continuing with successive letters in sequence for the divisions established. The range of each slope group must be defined in the legend accompanying the maps, accompanied by a statement indicating that the groups apply to other than agricultural lands.

D. DIFFERENTIATION OF SOILS.

The system of classification of soil types and series as established by the Division of Soil Survey, Bureau of Chemistry and Soils, will be followed on all Conservation Surveys, with the following exceptions:

1. No phases of types will be shown to indicate topographic conditions which are covered by the slope classifications.

2. No phases of types will be shown to express conditions of erosion which are covered by the erosion designations.

Soil types should be designated by numerals in the composite legend.

Final correlation of soil types will be made by the Inter-bureau Soil Correlation Committee, which consists of representatives from the Bureau of Chemistry and Soils and the Soil Conservation Service.

The object of the differentiation of soils in land classification will be to establish units which will express major differences in erosion potentialities and land-use adaptations. This implies grouping of soil types on the basis of their textural, structural, and other characteristics to express similarity in erosion potentiality, natural productiveness, etc.

E. CORRELATION.

Final correlation of the conservation surveys of each area will be made from the Washington office of the Soil Conservation Service.

Sequence of Symbols

Erosion (sheet, gully, wind removals, wind accumulations)—Land Use
Slope—Soil

The following hypothetical composite symbol should be used:

$$\frac{\overline{3} \text{ ⑦ } R \overset{\wedge}{F^1} - L}{6B - 12} \text{ which means as follows:}$$

$\overline{3}$ —25 to 75 percent of topsoil lost by sheet erosion with erosion stabilized.

⑦—occasional gullies, uncrossable by tillage implements.

R—25 to 75 percent of the A horizon removed by wind action.

^AF¹—wind accumulations 0 to 6 inches deep, covering less than one-third of the area delineated from which the topsoil previously has been removed and the accumulations are now partially stabilized.

L—cultivated.

6B—slope suitable for cultivated crops, with a dominant slope of 6 percent for the area delineated.

12—Cecil sandy loam (varies for each area).

Where wind erosion symbols are used in conjunction with water erosion symbols, the water erosion symbols will precede the wind erosion symbols, thus:

3 7 R F2

IV.—REPORTS

An erosion report must be prepared for each area surveyed. Planimeter data from the erosion survey will be assembled in the Washington office, but much of the report must be written by the men in charge of the survey. An outline for reports will be furnished.

ADDENDA

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

ADDENDA

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

ADDENDA

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be from a notebook or a set of legal pads. The edges of the paper are slightly irregular, suggesting it might be part of a bound volume. The lighting is even, and there are no markings or text on the page.

ADDENDA

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

ADDENDA

[illegible]

ADDENDA

A series of 15 horizontal dashed lines spanning the width of the page, intended for handwritten notes or answers. The lines are evenly spaced and extend from the left margin to the right margin.

ADDENDA

ADDENDA

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

ADDENDA

ADDENDA

ADDENDA

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

ADDENDA

NATIONAL AGRICULTURAL LIBRARY



1022790356